

Recommended Ecological Screening Values (mg/kg) for Soil .

CONSTITUENT	Target Analyte List	Target Compound List	Screening Value	Source
Inorganics				
Aluminum	✓		50	[2]
Antimony	✓		3.5	[5]
Arsenic	✓		10	[2]
Barium	✓		165	[5]
Beryllium	✓		1.1	[5]
Boron			0.5	[2]
Cadmium	✓		1.6	[5]
Chromium	✓		0.4	[2,3]
Cobalt	✓		20	[1, 2, 4]
Copper	✓		40	[5]
Iron	✓		200	[2]
Lanathum			50	[2]
Lead	✓		50	[1, 2]
Lithium			2.0	[2]
Manganese	✓		100	[2]
Mercury (inorganic)	✓		0.1	[2]
Mercury (methyl)	✓		0.67	[5]
Molybdenum			2.0	[2]
Nickel	✓		30	[2]
Selenium	✓		0.81	[5]
Silver	✓		2.0	[2]
Technetium			0.2	[2]
Thallium			1.0	[2]
Tin			53	[5]
Titanium			1,000	[2]
Tungsten			400	[2]
Uranium			5.0	[2]
Vanadium	✓		2.0	[2]
Zinc	✓		50	[2]
Mineral Pollutants				
Bromine			10	[2]
Cyanide, free (total)	✓		0.9	[3]
Cyanide, comlex (total)	✓		5.0	[1]
Thiocyanates			2.0	[4]
Fluorene			30	[2]

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CONSTITUENT	Target Analyte List	Target Compound List	Screening Value	Source
Iodine			4.0	[2]
Sulfur			2.0	[1]
Monocyclic Aromatic Hydrocarbons				
Benzene		✓	0.05	[4]
Biphenyl			60	[2]
Ethylbenzene		✓	0.05	[1,4]
Toluene		✓	0.05	[1,4]
Trichloroethylene		✓	0.001	[4]
Xylene		✓	0.05	[1,4]
Total MAH's			0.1	[1]
Phenolic Compounds				
Phenol		✓	0.05	[4]
Chlorophenol, 3-			7.0	[2]
Chlorophenols (each)		✓	0.01	[1]
Chlorophenols (total)		✓	0.01	[1]
Dichlorophenol, 3,4-			20	[2]
Dichlorophenols (total)			0.003	[4]
Dinitrophenol, 2,4-	✓		20	[2]
Monochlorophenols (total)			0.0025	[4]
Nitrophenol, 4-		✓	7.0	[2]
Pentachlorophenol		✓	0.002	[4]
Tetrachlorophenol, 2,3,4,5-			20	[2]
Tetrachlorophenols (total)			0.001	[4]
Trichlorophenol, 2,4,5-	✓		4.0	[2]
Trichlorophenol, 2,4,6-			10	[2]
Trichlorophenols (total)			0.001	[4]
Polycyclic Aromatic Hydrocarbons				
Acenaphthene		✓	20	[2]
Anthracene		✓	0.1	[1]
Benzo(a)pyrene		✓	0.1	[1]
Chloronaphthalene		✓	1.0	[4]
Fluoranthene		✓	0.1	[1]
Naphthalene		✓	0.1	[1]
Phenanthrene		✓	0.1	[1]
Pyrene		✓	0.1	[1]
Total PAH's			1.0	[1,4]

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Chlorinated Hydrocarbons				
Aliphatic chlorinated hydrocarbons (each)			0.1	[1]
Aliphatic chlorinated hydrocarbons (total)			0.1	[1]
Carbon tetrachloride		✓	1,000	[2]
Chlorinated hydrocarbons (total)			0.1	[1]
Chloroacetamide			2.0	[2]
Chloroaniline, 3-			20	[2]
Chlorobenzene (each)		✓	0.05	[1]
Chlorobenzene (total)		✓	0.05	[1]
Cis-1,4-dichloro-2-butene			1,000	[2]
Dichloroaniline, 2,4-			100	[2]
Dichloroaniline, 3,4-			20	[2]
Dichlorobenzene			0.01	[4]
Dichloroethane, 1,2-		✓	0.4	[4]
Dichloromethane		✓	2.0	[4]
Dichloropropane, 1,2-			700	[2]
Hexachlorobenzene		✓	0.0025	[4]
Hexachlorocyclopentadiene		✓	10	[2]
Nitrobenzene		✓	40	[2]
Nitrosodiphenylamine, N-		✓	20	[2]
Pentachloroaniline			100	[2]
Pentachlorobenzene			0.0025	[4]
PCBs (total)		✓	0.02	[4]
Polycyclic chlorinated hydrocarbons (total)			0.1	[1]
Tetrachloroaniline, 2,3,5,6-			20	[2]
Tetrachlorobenzene			0.01	[4]
Tetrachloroethene			0.01	[4]
Tetrachloromethane			0.001	[4]
Trans-1,4-dichloro-2-butene			1,000	[2]
Trichloroaniline, 2,4,5-			20	[2]
Trichlorobenzene		✓	0.01	[4]
Trichloromethane (chloroform)			0.001	[4]
Vinyl chloride		✓	0.01	[4]
Pesticides				
Aldrin		✓	0.0025	[4]
Atrazine			0.00005	[4]
DDT/DDE/DDD (total)		✓	0.0025	[4]

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Dieldrin		✓	0.0005	[4]
Endrin		✓	0.001	[4]
Carbaryl			0.5	[4]
Carbofuran			0.2	[4]
HCH, a-			0.0025	[4]
HCH, b-			0.001	[4]
HCH, g- (Lindane)		✓	0.00005	[4]
Maneb			3.5	[4]
Organochlorinated (each)			0.1	[1]
Organochlorinated (total)			0.1	[1]
Total Pesticides			0.1	[1]
Other Pollutants				
Acrylonitrile			1,000	[2]
Catechol			20	[4]
Cresols			0.5	[4]
Cyclohexane			0.1	[1]
Cyclohexanon			0.1	[4]
Diethylphthalate		✓	100	[2]
Dimethylphthalate		✓	200	[2]
Di-n-butyl phthalate		✓	200	[2]
Ethylene glycol			97	[3]
Furan			600	[2]
Gasoline			20	[1]
Hydrochinon			1.0	[4]
Mineral Oils			50	[4]
Phthalates (total)			0.1	[4]
Pyridine			0.1	[1, 4]
Resorcinol			1.0	[4]
Styrene		✓	0.1	[1, 4]
Tetrahydrofuran			0.1	[1, 4]
Tetrahydrothiophene			0.1	[1, 4]

From: Friday, G. P. November 1998. Ecological Screening Values for Surface Water, Sediment, and Soil. Westinghouse Savannah River Company, Savannah River Technology Center, (WSRC-TR-98-00110), Aiken, SC 29808.

Source:

[1]Beyer (1990).

[2]Oak Ridge National Laboratory (Efroymsen et al. 1997a,b).

[3]CCME (1997).

[4]Ministry of Housing, Spatial Planning and Environment (1994).

[5]Crommentuijn et al. (1997).